



POTENTIOMETRIC SURFACE OF THE LLOYD AQUIFER,  
LONG ISLAND, NEW YORK, IN JANUARY 1984

The Lloyd aquifer, within the Cretaceous Lloyd Sand Member of the Raritan Formation, is a significant source of water for public supply and minor source for industrial use in Queens and Nassau Counties. In Suffolk County, the aquifer is virtually undeveloped. The potentiometric surface is monitored by the U.S. Geological Survey. This map depicts static or near-static water levels of January 1984 in 75 wells screened in the Lloyd and Port Washington aquifers. Wells screened in the Port Washington aquifer in Pleistocene deposits in northern Nassau County are included because the Port Washington aquifer seems to be hydraulically connected to the Lloyd aquifer; the stratigraphic relationship of the two aquifers is described in Kilburn (1979) and Kilburn and Krulikas (1987). The northern limit of the Lloyd, and the extent of the Port Washington aquifer and the aquifer in which each well is screened, are indicated on these maps.

General trends of the potentiometric surface are similar to those of the two major overlying aquifers (pl. 1, 3); it gradually rises from a depression in the western part of the island to an east-west trending mound in the central part. The potentiometric-surface altitude ranges from 23.2 ft below sea level in central Queens County to 41.6 ft above sea level in north-central Suffolk County.

The potentiometric-surface altitude of the Lloyd aquifer is, in general, 0.5 to 1.5 ft higher than in 1983 (Doriski, 1987) but is still lower than in 1979 (Donaldson and Koszalka, 1983). The depression in northwestern Nassau County is slightly larger and deeper than in 1983, probably because of local pumping conditions. Several areas in northeastern Nassau County also show a slightly lower potentiometric-surface altitude than in 1983, also a result of local pumping conditions. The depression in Queens County is slightly smaller and higher than in 1983 and is 2 to 3 ft higher than in 1979.

In eastern Suffolk County, the Lloyd aquifer is saline and has no observation wells. The northern limit of the Lloyd aquifer in Kings and Queens Counties has been revised in accordance with data of Buxton and others (1981); the limits of the Lloyd and Port Washington aquifers in Nassau County have been revised according to Kilburn (1979) and Kilburn and Krulikas (1987).

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